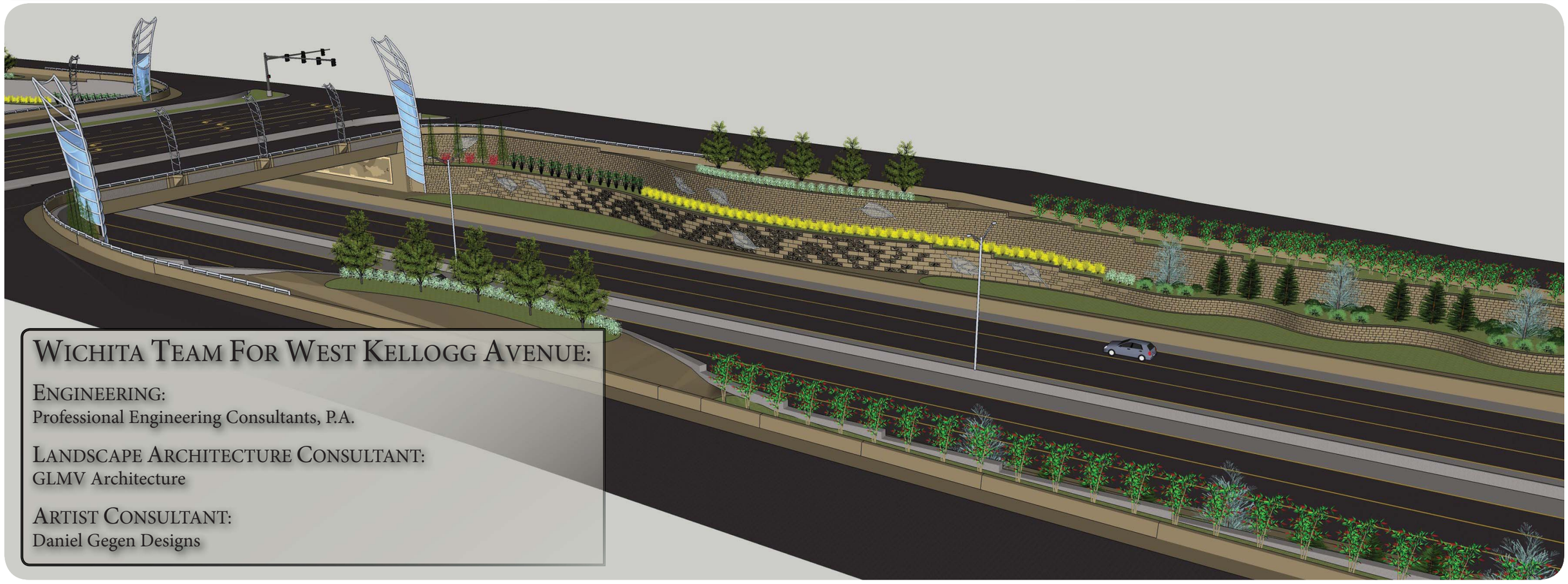
151st St. Improvements

135th St. Improvements

119th St. Improvements



Wichita Team For West Kellogg Avenue:

Engineering:
Professional Engineering Consultants, P.A.

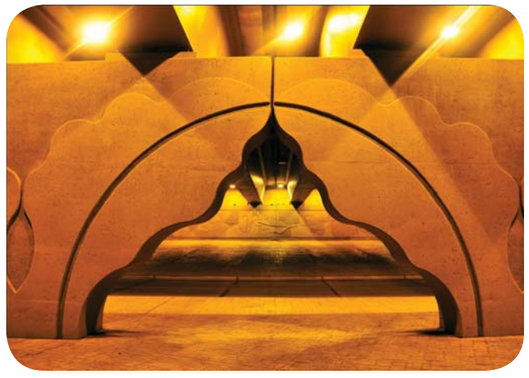
Landscape Architecture Consultant:
GLMV Architecture

Artist Consultant:
Daniel Gegen Designs

West Kellogg Avenue (US-54): 111th St. W. to 151st St. W.
March 1st, 2011

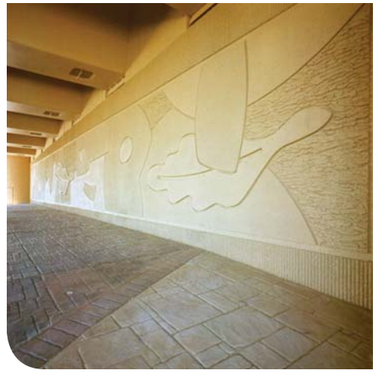
Revisited and Redeveloped:

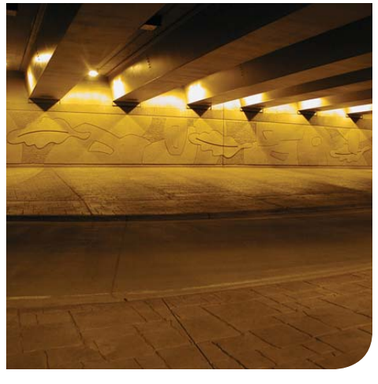
A 3-span trapezoidal steel box girder bridge has been proposed to elevate Kellogg over 119th Street. The design team has proposed a modified version of the original bridge abutment walls and piers as originally constructed along Kellogg over both Tyler and Maize Roads. Newly designed form liner patterns have been developed to be cast into the bridge abutment walls and piers to loosely mimic those previously used.

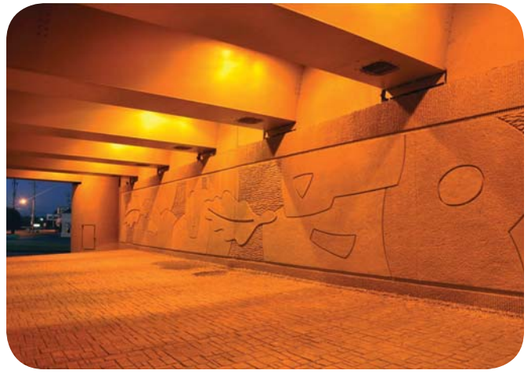


Modified Bridge Abutment Piers:

The leaf shaped bridge abutment structures, as originally used at Tyler and Maize, have been revisited in order to incorporate issues addressed during the construction process and further attempt to bring to life the artist's original vision. Modifications have been made to improve upon the three dimensional qualities of the leaf patterns as originally constructed.



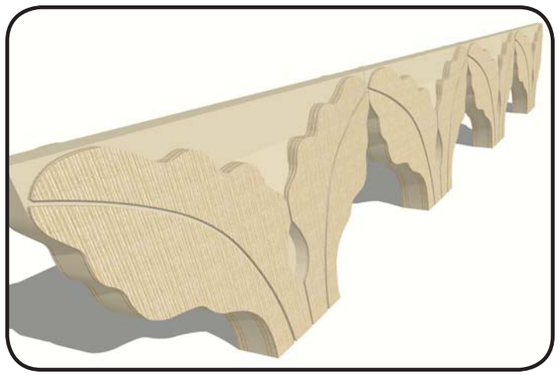


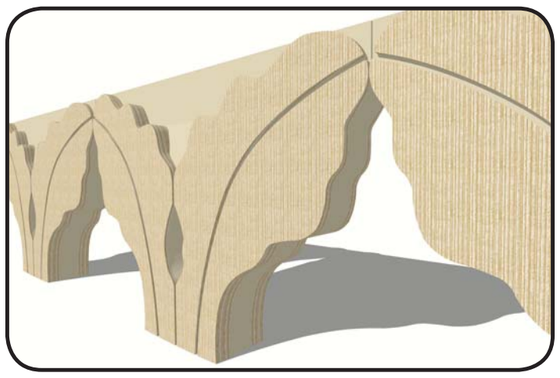


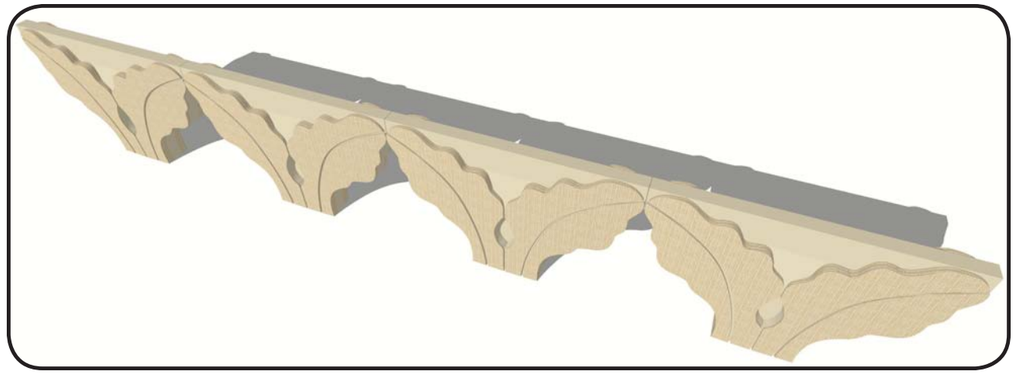
Modified Bridge Abutment Walls:

The shapes, as originally developed by the design team for the Tyler and Maize Improvement Projects, have been revisited for use on the bridge abutment walls. These patterns have been modified to further improve their constructability and visual impact while still representing an aerial view of the Kansas landscape.

CURVATURE: A strong sense of three dimensional volume is built into the modified forms.







FORM:

The newly modified Leaf inspired columns (to be located at the 119th Street crossing) will have a bolder, more dimensional look.

TEXTURE:

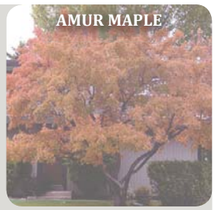
Reversing the texture (as previously used at Maize and Tyler) creates more unified surfacing and cleaner constructed edges while adding depth to the pattern.

RHYTHM:

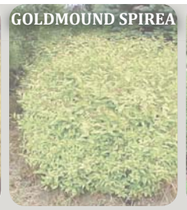
Dynamic arched lines lead the eye from one support to the next creating a visual rhythm.

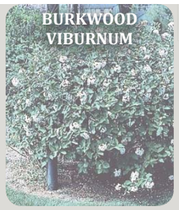
REDEVELOPED - ABUTMENT PIERS:

Slight modifications have been made to improve upon the three dimensional qualities of the leaf patterns. The team believes this has been achieved by incorporating several changes to the original design. Broader strokes have been used within the design pattern to help reduce damage caused during the process to remove the original concrete form work. Adding texturing to the surface of the leaf pattern helps to create depth and bring the design to life. Most importantly, adding curvature to the face of the abutment pier further accentuates the overall organic patterns and strengthens the sculptural form.



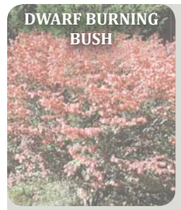
TREES - DECIDUOUS

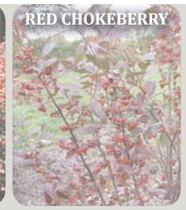


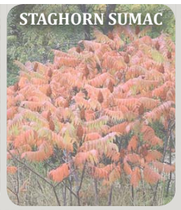


SHRUBS - DECIDUOUS - FLOWERING

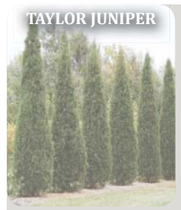
GRASS & PERENNIALS

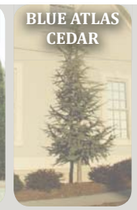




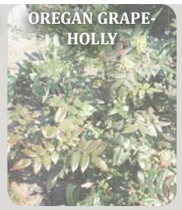


SHRUBS - DECIDUOUS - ORNAMENTAL





TREES - EVERGREEN



SHRUBS - EVERGREEN

PLANTERS: Planters have been incorporated along the retaining walls located between the Kellogg overpass and the adjacent frontage roads to help break up the sheer size of the walls. Once again, a Mechanically Stabilized Earth (MSE) retaining wall system has been proposed as the retaining wall system of choice at the 135th Street intersection. Several modifications to the size, layout, and location of the planters along the MSE walls will improve upon lessons learned. The railing, fractured fin texturing, and coping used to add aesthetic appeal to the original planters along Kellogg at Maize and Tyler will be incorporated into the new project.

ALIGNMENT: The elevated planting beds will be aligned in a manner to more appropriately interact with the surrounding environment. Planters have been located to specifically line up with each of the drive approaches connecting to the new frontage road system. It is the design team's intent to lower the typical elevation of the planting beds in order to more closely interact with traffic level viewing.

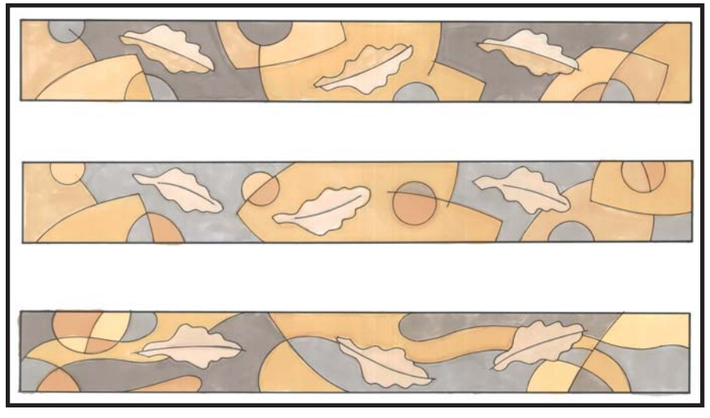
PLANT SELECTION/LAYOUT: Plantings have been arranged in a modified manner to take advantage of color and plant type massing rather than symmetrical layout patterns. This will lessen the impact of sporadic plant loss and unexpected growth patterns. Plantings within the new raised beds will consist entirely of native plant types and varieties that will require minimal maintenance and limited irrigation. It is anticipated that irrigation activities will be required during the first year of growth as the material acclimates to the environment and during only the limited number of weeks per year with the extreme heat.

Abutment Wall Inspiration:

Designs are inspired by aerial views of the Kansas landscape. Stylized forms are represented by using a variety of standard form liner textures. Strong directional lines lead the viewer's eye through the image in a smooth rhythmic manner.

Abutment Wall Designs:

The leaf motif is also used to aid in creating the visual flow within the design.



Vertical Elements Inspiration:

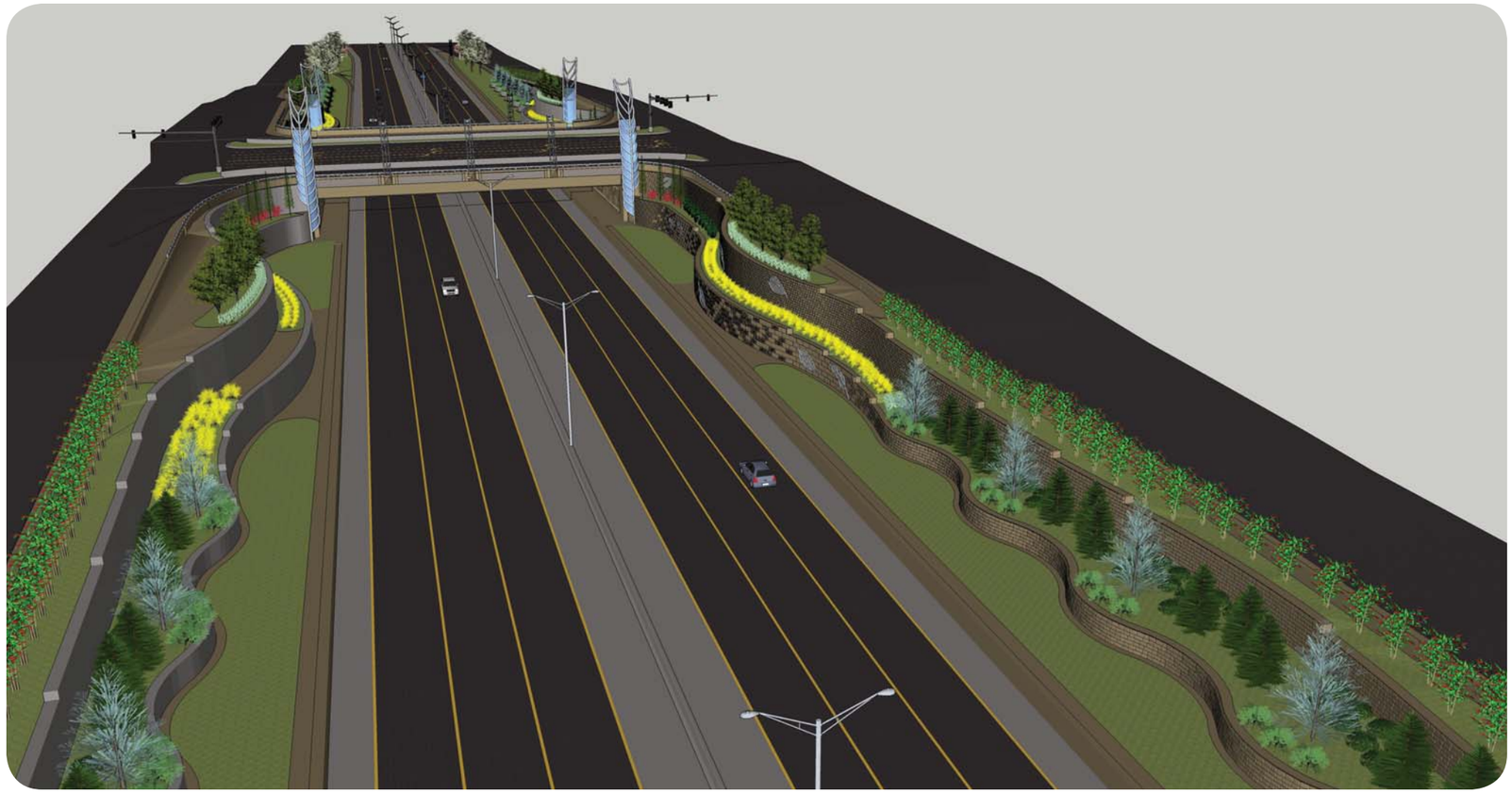
The design team has worked to develop a new group of sculptural site amenities that will help bring to life the artist's original motif, create a true sense of place, and better create the gateway experience which the roadway's alignment naturally develops. The design team analyzed various noteworthy public art installations found throughout Wichita, Kansas and created hybrid elements to help tie into the artist's original motif.

Notable influences included: "The Keeper of the Plains" sculpture at the heart of the city, the Cor-Ten Steel design elements used as part of the new bridge structures (constructed with the River Corridor Improvement Project), and the associated bridge structure.

The vertical elements carry many influences from existing architectural designs and sculptural forms found throughout the greater Wichita area. These include the "prairie-style" inspired pedestrian level light standards located along Douglas Avenue and the "neo-classical" lighted columns at Central and McLean. Color considerations are inspired by the "Wichita blue" found on the rooftop of Century II.

The spires created as part of Vicki Scuri SiteWorks' projects located at the Lewis Street Bridge and Douglas Avenue Bridge helped inspired both the use of strong lines and material selection.

Aesthetic Opportunities:
135th St. IMPROVEMENTS - Artistic Inspiration



Stainless Steel Spires:

A sequence of Large Stainless Steel Spires anchor the four corners of the new bridge structure. Mini Stainless Steel Spires further break up the horizontal plane of the bridge. Additional Mini Stainless Steel Spires pull the design motif out into the environment.

Inspiration For The Stainless Steel Spires:

The Stainless Steel Spires are intended to portray the look and feel of an oversized, abstracted, and streamlined stem structure similar to the leaf patterns throughout the site. The stem-shaped spires are a blend of the Kansas landscape, the rich connectivity of the Wichita community to the skies, and an overall organic simplicity.

Stainless Steel Leaves:

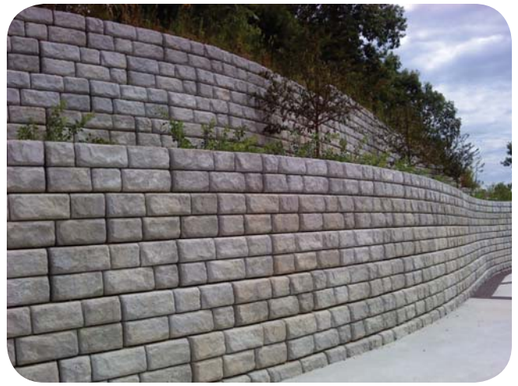
Large-scale sculpture leaf panels tie the stylized organic stem-shaped Stainless Steel Spires into the artist's original motif through an abstraction of the original leaf pattern.

Block Retaining Wall System:

To take advantage of the Right of Way width made available where Kellogg intersects 135th St., the design team developed a strategy to minimize cost impacts associated with the roadway project while maximizing the overall aesthetic appeal. The design team focused on using a terraced wall system which would allow for greater ease of construction. A segmented precast concrete block retaining wall system will greatly reduce the construction schedule and the associated project cost. Furthermore, the contractor will have a greater chance to build the frontage roads, redirect existing traffic patterns, and begin construction of the new road alignment without negative impact on the community.

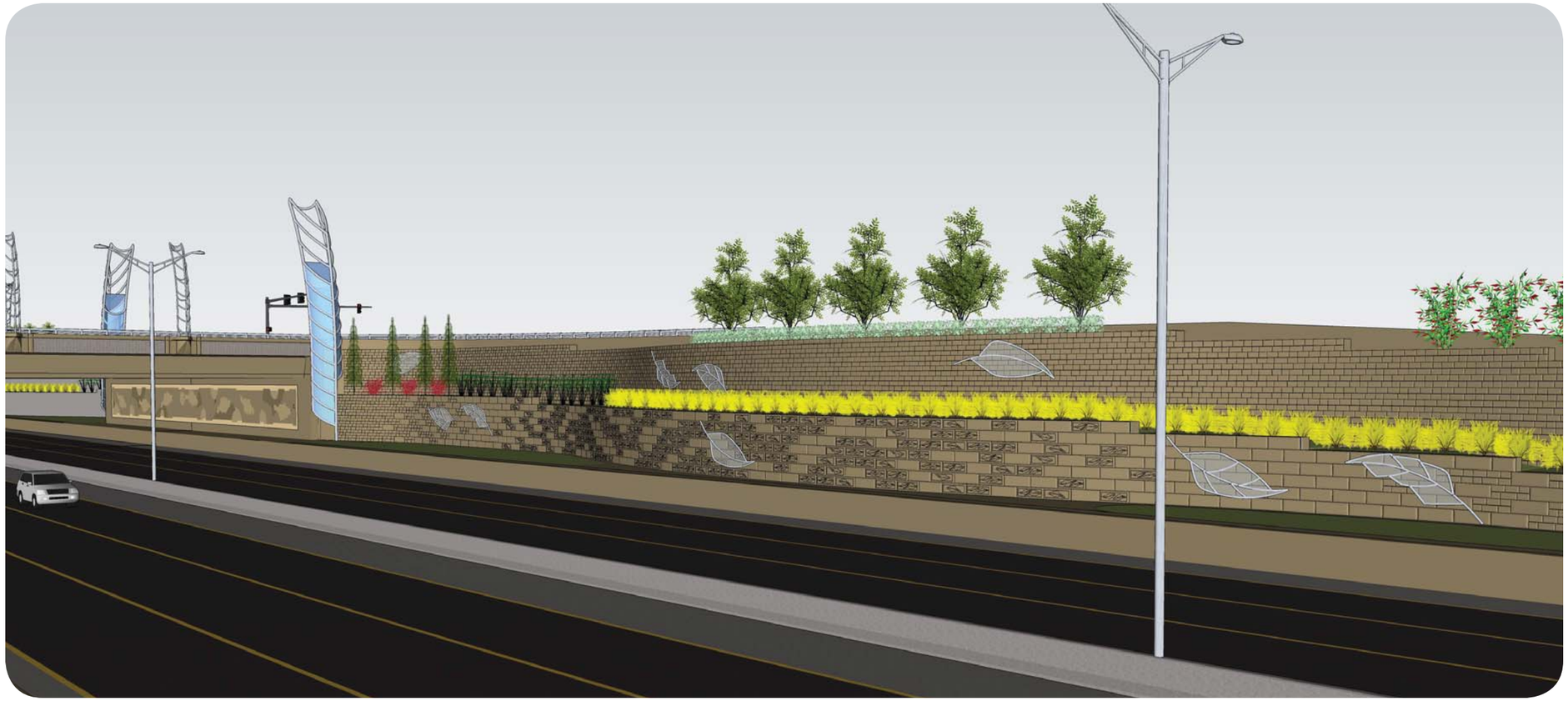
Gateway Effect:

Travelers are welcomed into the city with sculptured walls accented by a colorful pallet. A sense of rhythm is created by the undulating walls and leaf patterning cast directly into the block surface. The Stainless Steel leaves flow over the texture, as if they are being carried by the Kansas winds. Travelers will proceed through this visual experience while the lighted spires announce their arrival to Wichita.

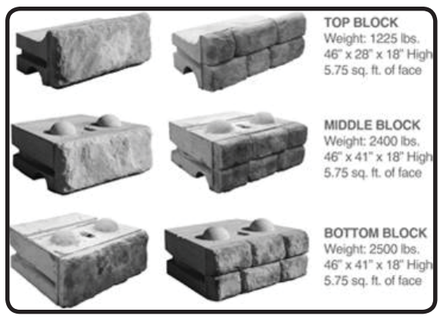


TERRACED WALL APPLICATION

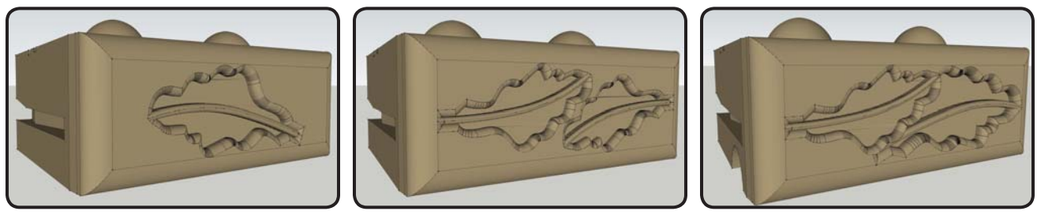
VEGETATED WALL APPLICATION



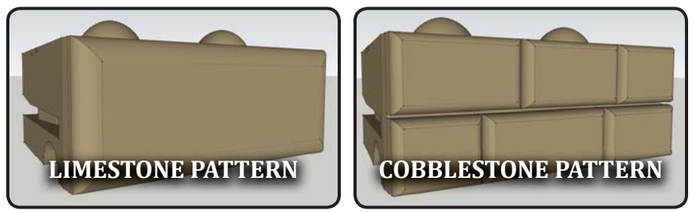
CUSTOM PATTERN DEVELOPMENT: The design team developed a method to construct custom block unit patterns. This allows for further integration of the motifs used throughout the West Kellogg corridor. Blending the manufacturers existing product line and custom block textures will create a rich aesthetic feel using cost effective material. The terraced walls coupled with the blended patterning will make the area appear both more interesting and larger. The spacial illusion created by these site features, along with the wall layout, will help reduce possible tunnel vision.



INTIGRATED WALL SYSTEM

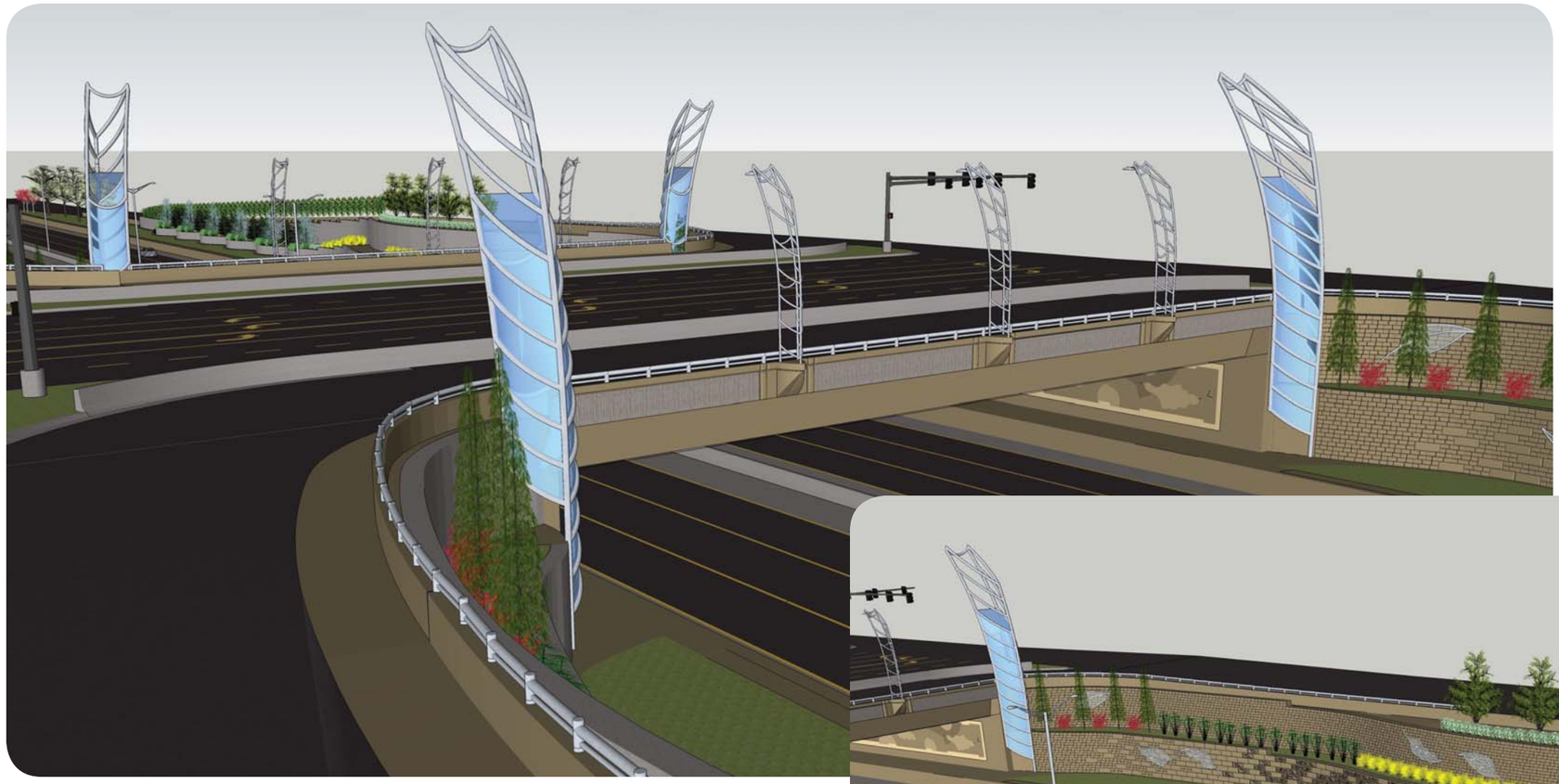


CUSTOM BLOCK UNIT PATTERNS



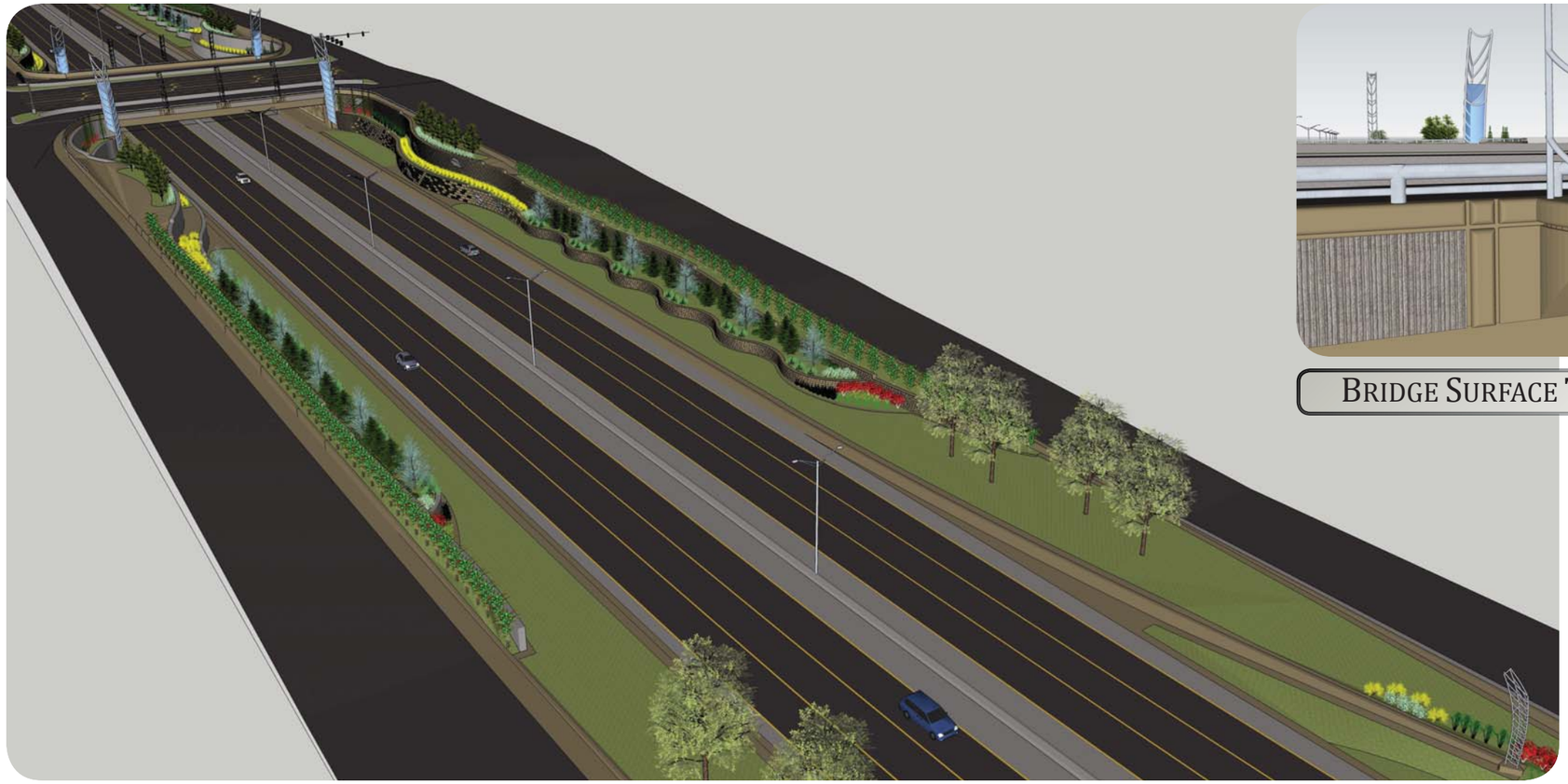
STANDARD BLOCK UNIT PATTERNS

AESTHETIC OPPORTUNITIES:
135th St. IMPROVEMENTS - BLOCK RETAINING WALL



SITE LIGHTING: The design team has developed the Large Stainless Steel Spires to be internally lit using L.E.D. ribbon lighting affixed to each of the three main structural beams. Additionally, the Mini Stainless Steel Spires have been developed to integrate off-the-shelf L.E.D. street lighting fixtures. This allows for the Mini Stainless Steel Spires to act both as sculptural elements and functional light pole bases.

INNOVATIVE PRODUCT USAGE: After studying the site constraints and product capabilities, the design team developed a layout that would ease the end user into their passage under the 135th Street bridge. Once the layout was developed, the team worked to use the block wall manufacturer's existing product line in a new, exciting, and innovative manner. The team, with the manufacturer, developed a cost effective yet durable manner to manufacture the product with an integrally colored concrete textured wearing face while constructing the remainder of the block with a less expensive concrete mix. This allows for the wall to be constructed in a color compatible with the greater Kellogg corridor at a fraction of the cost.



BRIDGE SURFACE TREATMENT

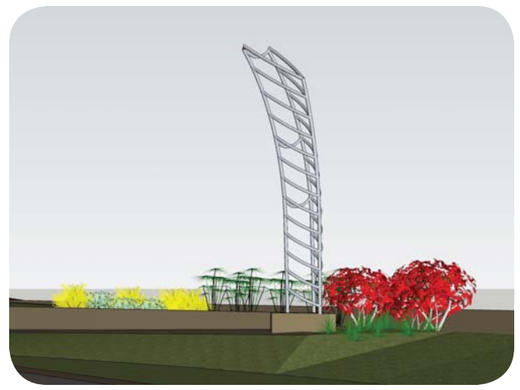
PROTECTIVE BARRIER RAIL

STAINLESS STEEL SCULPTURES

SURFACE TREATMENTS - ABUTMENT WALL PATTERNING: The surface of the abutment walls and the face of the bridge structure will be treated in a similar manner to those constructed along Kellogg at the Maize and Tyler intersections. The abutment wall surface under the 135th Street bridge will have a new modified interpretation of the original textured art panels used at Maize and Tyler. The abutment wall design will be created and manipulated in a manner which will allow for it to be used at both the 119th and 135th Street intersections.

SURFACE TREATMENTS - BRIDGE FACE PATTERNING: The face of the bridge will be surfaced using the same fractured fin texture (along with the associated coping cap design) to match the cast-in-place elevated planting beds located along Kellogg at Maize and Tyler along with the newly constructed 119th Street intersections.

MINI STAINLESS STEEL SPIRES

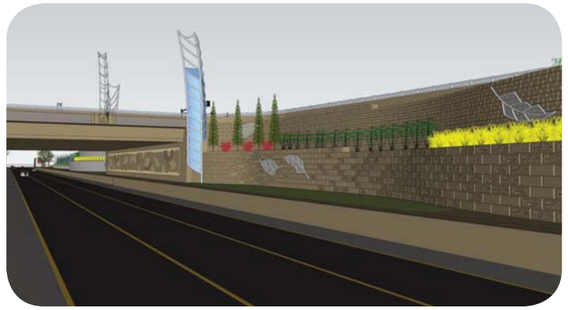


VEHICLE VIEW - G

VEHICLE VIEW - E

VEHICLE VIEW - C

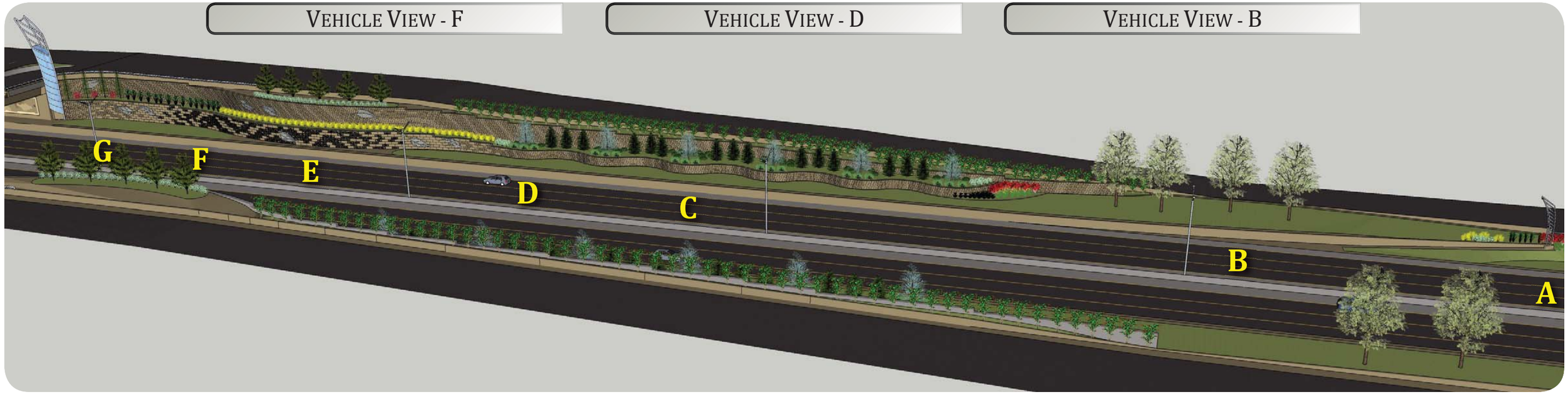
VEHICLE VIEW - A



VEHICLE VIEW - F

VEHICLE VIEW - D

VEHICLE VIEW - B



AESTHETIC OPPORTUNITIES:
135th St. IMPROVEMENTS - STREET VIEW